## **Description of Additional Supplementary Files**

Title: Supplementary Data 1.

Description: Detailed step-by-step pipetting scheme for every step of the process, from sample preparation to quantifying the library for loading on the sequencer.

Tab 1: Crude RNA preparation by QuickExtract and boiling

Tab 2: Setup of the reverse transcription reaction

Tab 3: Pipetting scheme for the PCR1 Top-up reaction

Tab 4: PCR pooling and Exostar treatment

Tab 5: Pipetting scheme for the setup of PCR2

Tab 6: NGS sample preparation

Tab7: NGS settings for MiSeq system

## Title: Supplementary Data 2.

Description: All primer and amplicon sequences used in the study.

Tab 1: A list of all forward primers and barcodes used for SARSeq

Tab 2: A list of all reverse primers and barcodes used for SARSeq

Tab 3: qPCR Primers used to optimize amplicons for Influenza and HRV

Tab 4: Sequences of all virus-specific amplicons detected in this manuscript

Tab 5: Oligonucleotides used to clone the T7 transcribed internal control without generating templates that interfere with primer synthesis regulations.